OPTICAL SYSTEM FOR FORMING AN IMAGE IN SPACE

Abstract of the Disclosure:

An optical system (100, 200, 400, 500) that projects a real image (140, 412, 504) into space and includes one or more features located along the optical path that enhance the viewability of the real image. The optical system includes a converging element (128, 208, 416, 528) for converging a portion of source light (104, 516) so as to form the real image. One viewability-enhancing features is the use of a broadband reflector-polarizer (124, 208, 408, 532) having high transmitting and reflecting efficiencies. Another viewability-enhancing features is the use of polarizing elements (116, 124, 136, 408, 420, 424) having substantially matched bandwidth responses and/or comprising an achromatic design. An additional viewability-enhancing feature is the use of a wide-view film (144) to increase the viewing angle of the image.

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